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24. Real-time investment tool

| | |
|--------------------------------------|--|
| Login | |
| Name | <input type="text" value="jricci"/> |
| Password | <input type="password" value="*****"/> |
| Monitor Resolution | |
| <input type="radio"/> | <input type="radio"/> |
| Options | |
| <input type="button" value="Login"/> | <input type="button" value="Help"/> |

FIG. 1

Bullrun

Bullrun is an on-line stock recommendation system. It runs in four timescales, producing price patterns on a 1 hour, 1 day, 1 month and 1 quarter perspective.

[v1.0 has a 15 minute, 15 hour, 15 day, 15 week timescale.]

It provides a continuous scoring of stocks according to price pattern, macroeconomic variable, and combined strategies. [v1.0 will only include price pattern strategy.] Future versions will incorporate strategies relating to earnings estimates and valuation metrics. The product allows users to drill down to find the current score of stocks in any country, industry, price pattern group or combination of categories.

Users create and modify their portfolios based upon the evolving stock scores. The system will issue buy and sell signals on stocks generated by the various strategies. Clients can analyze the past performance of the trading strategies for the entire universe of stocks in the Bullrun system.

The system also tracks clients' performance and trade requests.

FIG. 2

Screen Layout

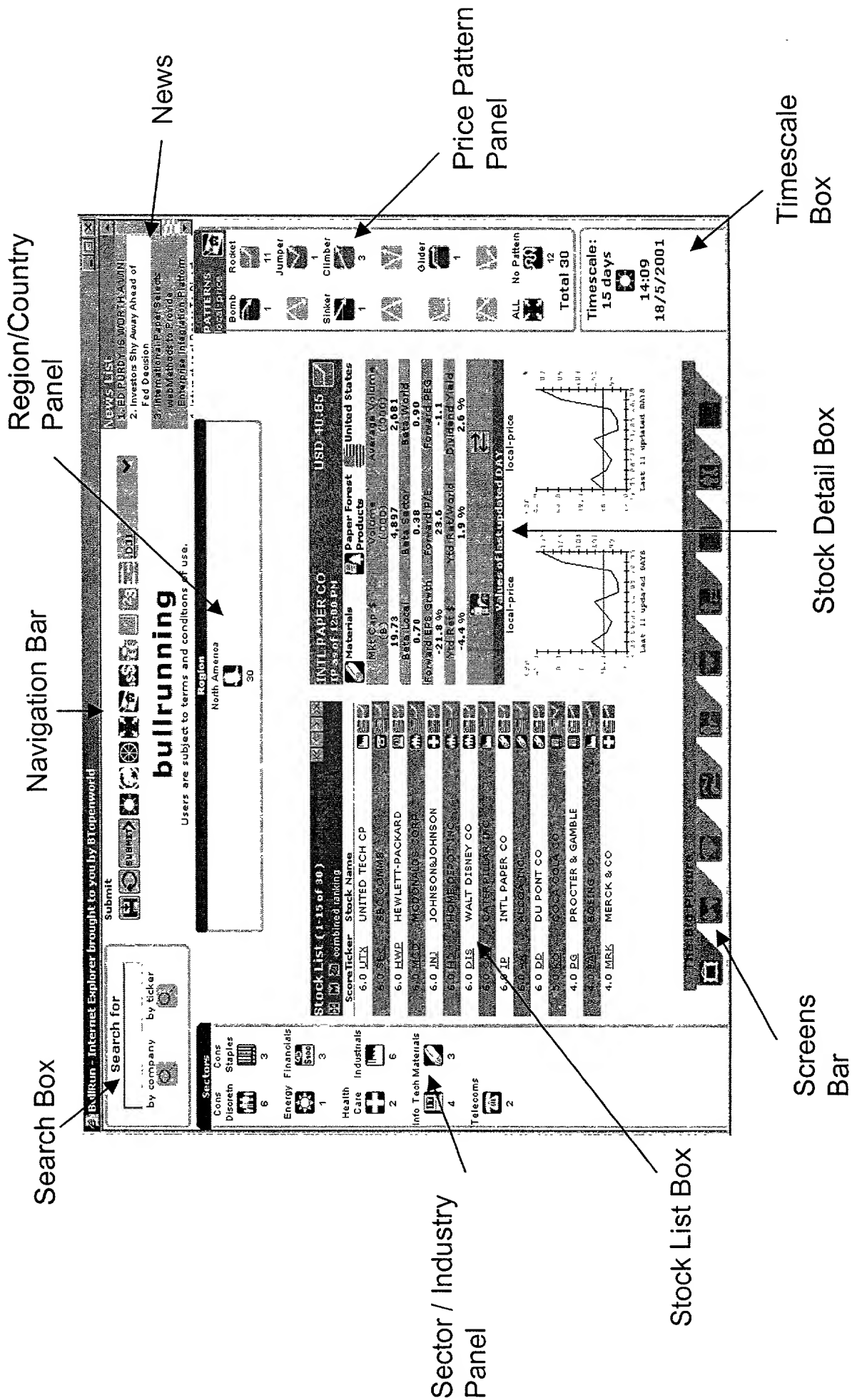


FIG. 3

Navigation Bar

Allows user to modify icon settings

[v1.0 has a 15 minutes, 15 hour, 15 day, 15 week timescale. Analyst Rating does not currently have any data.]

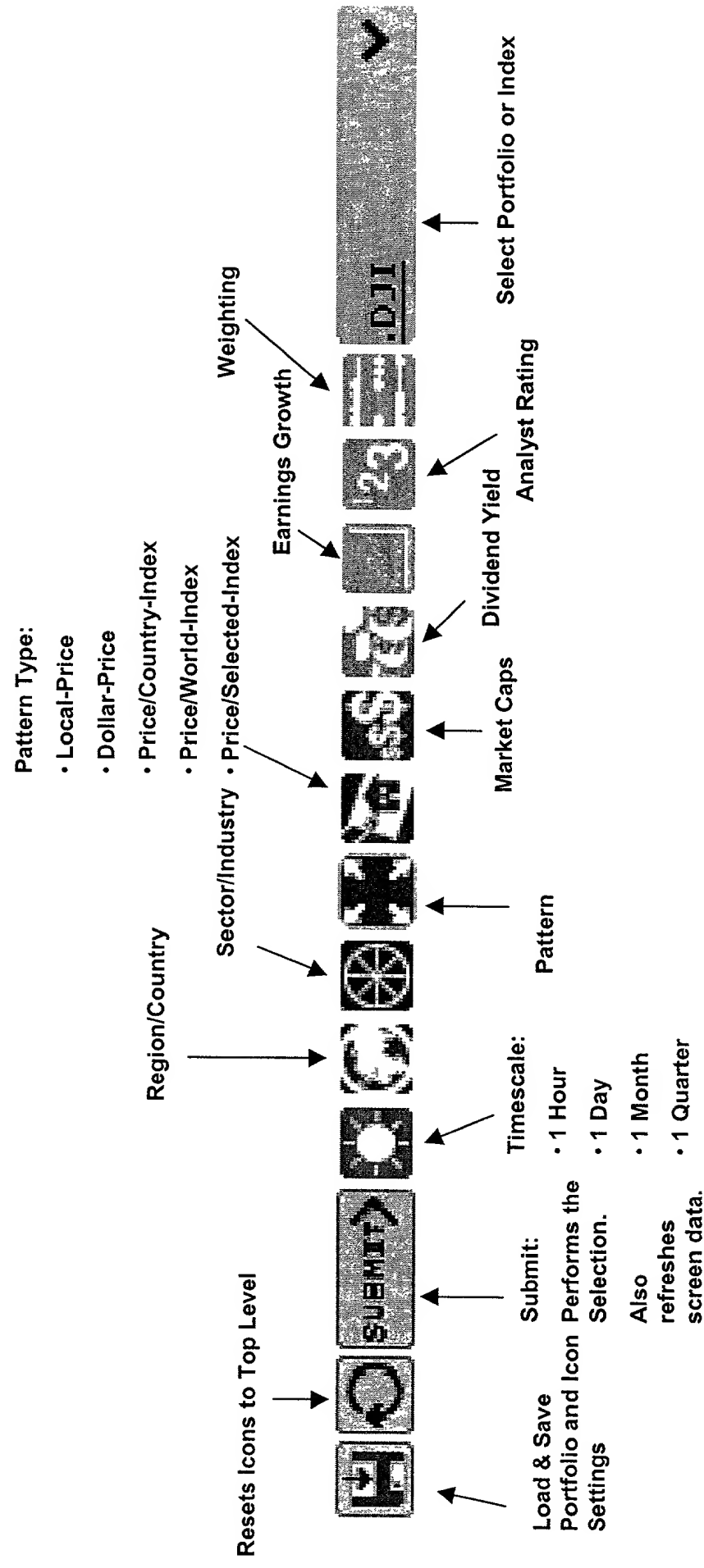


FIG. 4

Navigation Bar

Behaviour

- Modifying any of the following icons requires the user to hit SUBMIT before a change is made to the user's screen:
 Timescale, Region/Country, Sector/Industry, Pattern, Pattern Type, Market Caps, Dividend Yield, Earnings Growth, Analyst Rating, Weight
- Any modification to one of the above icons away from the default settings will be highlighted on the Navigation Bar with a black underline.
- A modification to any of the 3 panels (Region, Sector, Pattern) will automatically modify the Navigation Bar and apply SUBMIT.



FIG. 5

Navigation Bar - Load & Save, Reset, Submit

Load & Save Portfolio and Icon Settings

- Allows user to save and load modifications to the icon settings as well as a particular selected portfolio or index screen view.

Reset Icons to Top Level

Resets all icon settings to the default:

- Timescale = 1 month
- Region = Global
- Sector = All
- Pattern = All
- Pattern Type = Local Price
- Caps = All
- Dividend Yield = All
- Earnings = All
- Rating = All
- Weightings = Number of Stocks

SUBMIT

- Performs the selection of modifying an icon setting.
- Refreshes screen data.

FIG. 6

Navigation Bar Selections - Timescale, Region/Country, Sector/Industry

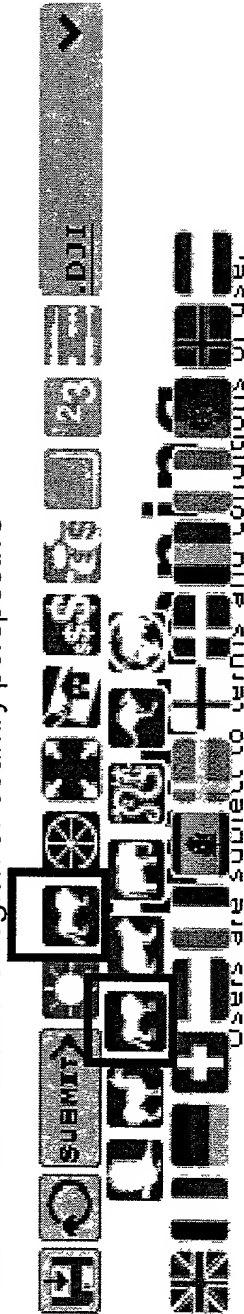
Timescale: 1 month

Allows user to view price pattern behavior from a 1 hour, 1 day, 1 month or 1 quarter perspective [v1.0 has a 15 minute, 15 hour, 15 day, 15 week timescale.]



Region: Europe

Allows user to select a region or country perspective



Sector: Industrials

Allows user to select a sector or industry perspective

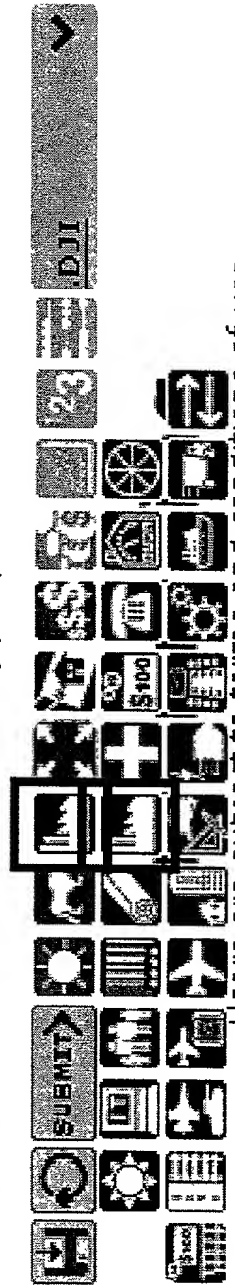


FIG. 7

[illegible]

Pattern: All

Allows user to view stocks that display a particular price pattern behavior



Pattern Type: Local-Price

Allows user to view five categories of price movements



- **Local-price:** displays price patterns calculated with the local currency price of the stock.
- **Dollar-price:** displays price patterns calculated with the dollar equivalent price of the stock.
- **Price/Country-Index:** displays price patterns calculated with the stock price divided by its MSCI country index to show relative price movements.
- **Price/World-Index:** displays price patterns calculated with the stock price divided by the MSCI world index to show relative price movements.
- **Price/Selected-Index:** displays price patterns calculated with the stock price divided by the Index selected in the Navigation Bar to show relative price movement. This display does not apply to personal or Bullrun portfolios.

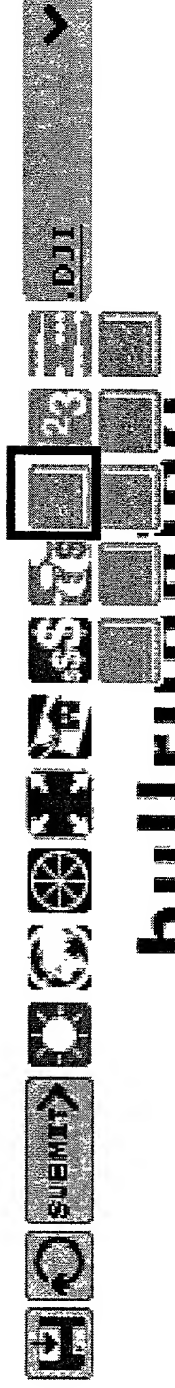
FIG. 8

Navigation Bar Selections - Earnings Growth, Analyst Ratings

[v1.0 Analyst Rating does not currently have any data.]

Earnings Growth: All

Allows user to select an earnings growth trajectory perspective

**Analyst Rating:** All

Allows user to select an analyst stock rating perspective



FIG. 10

Navigation Bar Selections - Weighting, Portfolio & Index Selection

Weighting : Number of Stocks

Allows user to view selections on either an aggregate number of stocks or a percentage basis perspective.



Portfolio & Index Selection : .DOW

Allows user to select a portfolio or index

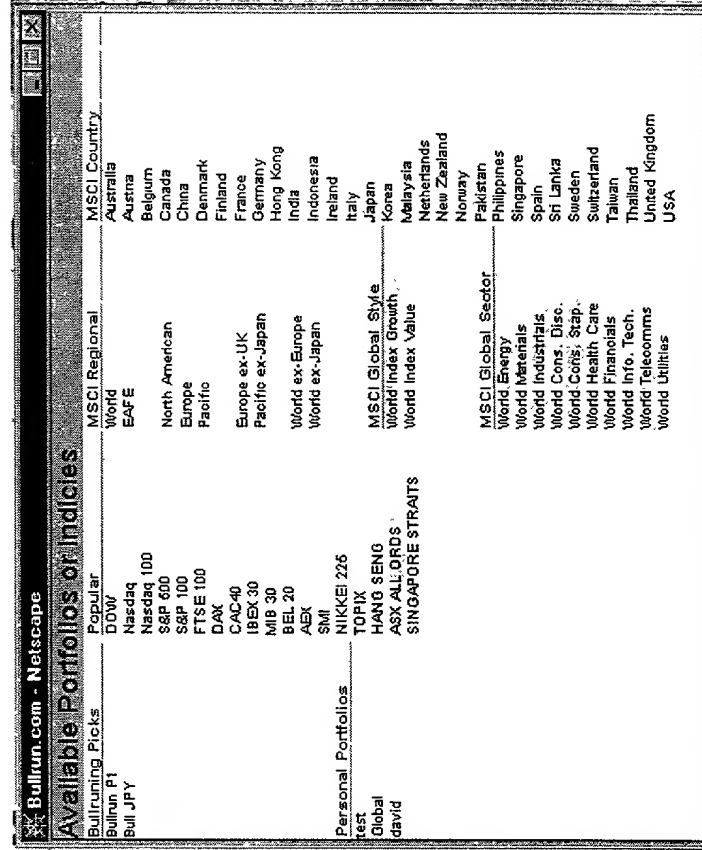


FIG. 11

[illegible][illegible]

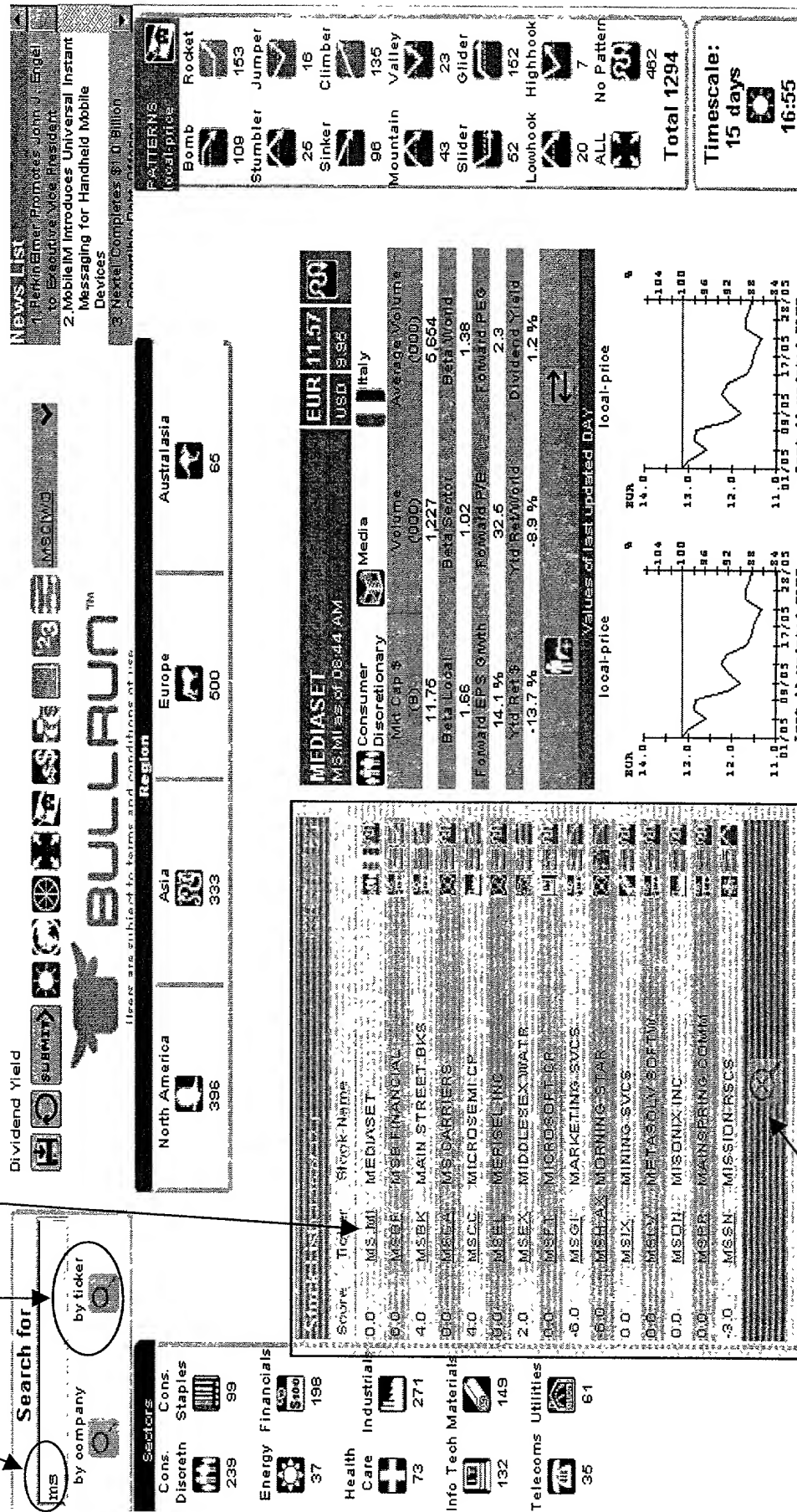
| Score | 1 to 10 | 11 to 20 | 21 to 30 | 31 to 40 | 41 to 50 | 51 to 60 | 61 to 70 | 71 to 80 | 81 to 90 | 91 to 100 |
|-------|---------|-------------------|----------|----------|----------|----------|----------|----------|----------|-----------|
| 10.0 | MCTI | MICRO-COMP TC | | | | | | | | |
| 20.0 | MGEN | MICRO GENERAL | | | | | | | | |
| 30.0 | MLIN | MICRO LINEAR CP | | | | | | | | |
| 40.0 | MTIX | MICRO THERAPEUT | | | | | | | | |
| 50.0 | MICI | MICRO CELL B | | | | | | | | |
| 60.0 | MCHP | MICRO CHIP TECH | | | | | | | | |
| 70.0 | MCDE | MICRO CODE PHARM | | | | | | | | |
| 80.0 | MEEL | MICRO ELECTRONICS | | | | | | | | |
| 90.0 | MEDQ | MICRO QUAL CP | | | | | | | | |
| 100.0 | MEDMAX | MICRO MEDICAL IND | | | | | | | | |
| 110.0 | MUSE | MICRO MUSIC INC | | | | | | | | |
| 120.0 | MNEF | MICRO NECTUR | | | | | | | | |
| 130.0 | ML | MICRON LITCH | | | | | | | | |
| 140.0 | MLT | MICRON LIT WIRE | | | | | | | | |
| 150.0 | MGRS | MICRO S-SYS | | | | | | | | |

FIG. 12

FIG. 12

Search Box

Allows user to search for an equity by stock ticker



return to previous screen view

FIG. 13

News

News

Displays relevant news based upon the user's current selected icons

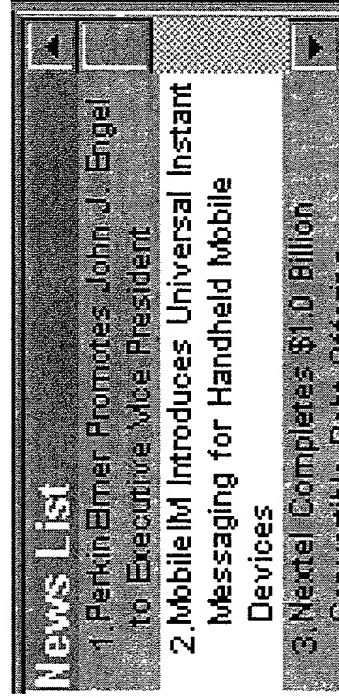




FIG. 14

[illegible]

Displays the number of stocks in a Region or Country and allows user to drill down for further detail.

| Region | | | |
|---------------|---|-----|--|
| North America |  | 396 | |
| Asia |  | 333 | |
| Europe |  | 500 | |
| Australasia |  | 65 | |

North America

4426










Asia

Europe  494

Australasia



65

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FIG. 15

Sector / Industry Panel

Displays the number of stocks in a Sector or Industry and allows user to drill down for further detail.

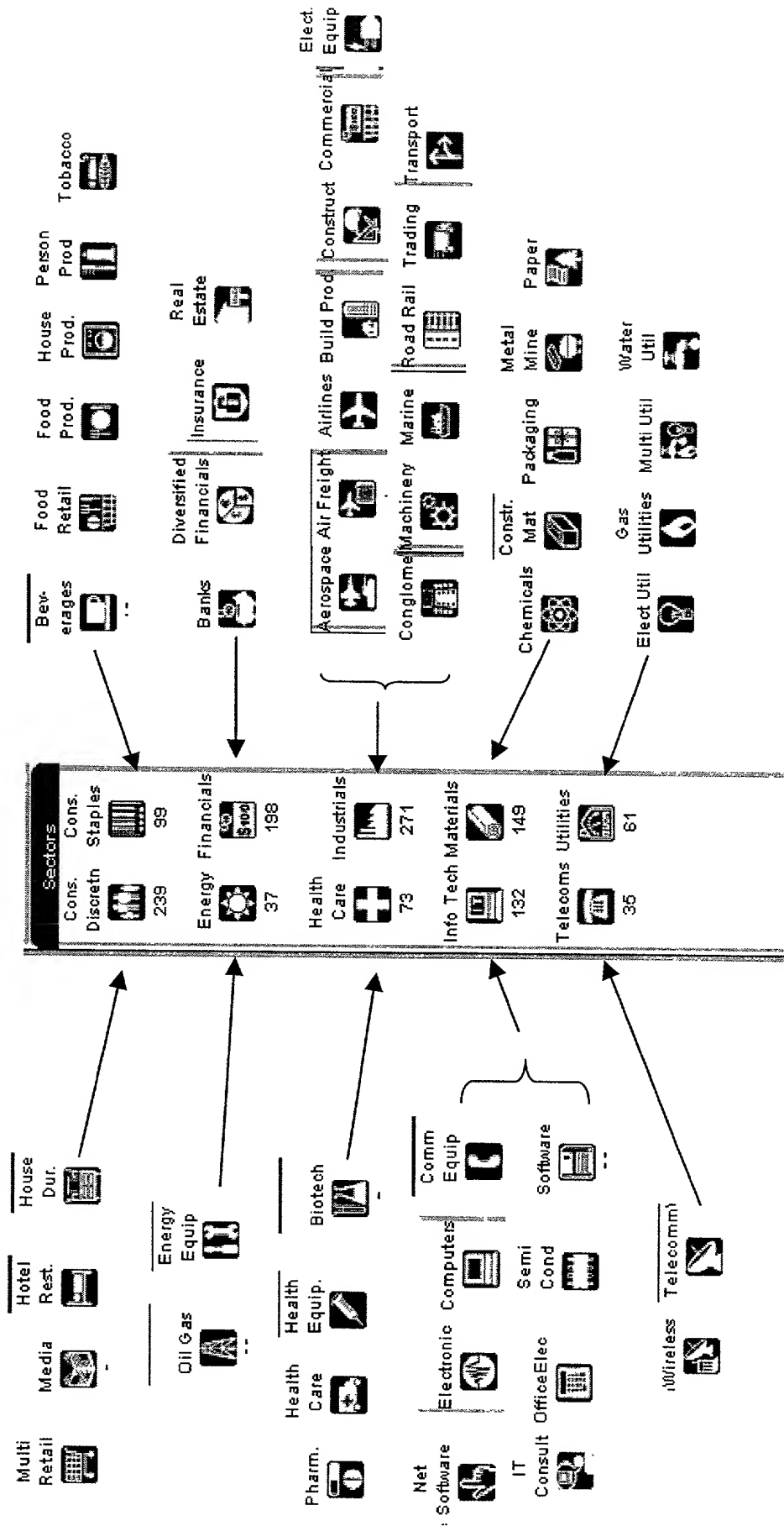


FIG. 16

Price Pattern Panel

Displays the number of stocks that correspond to a price pattern based on a selected timescale. Allows the user to view a group of stocks that exhibit a particular price pattern.

There are 12 mutually exclusive price patterns. There is also a No Pattern category.

Pattern Type - see Navigation Bar

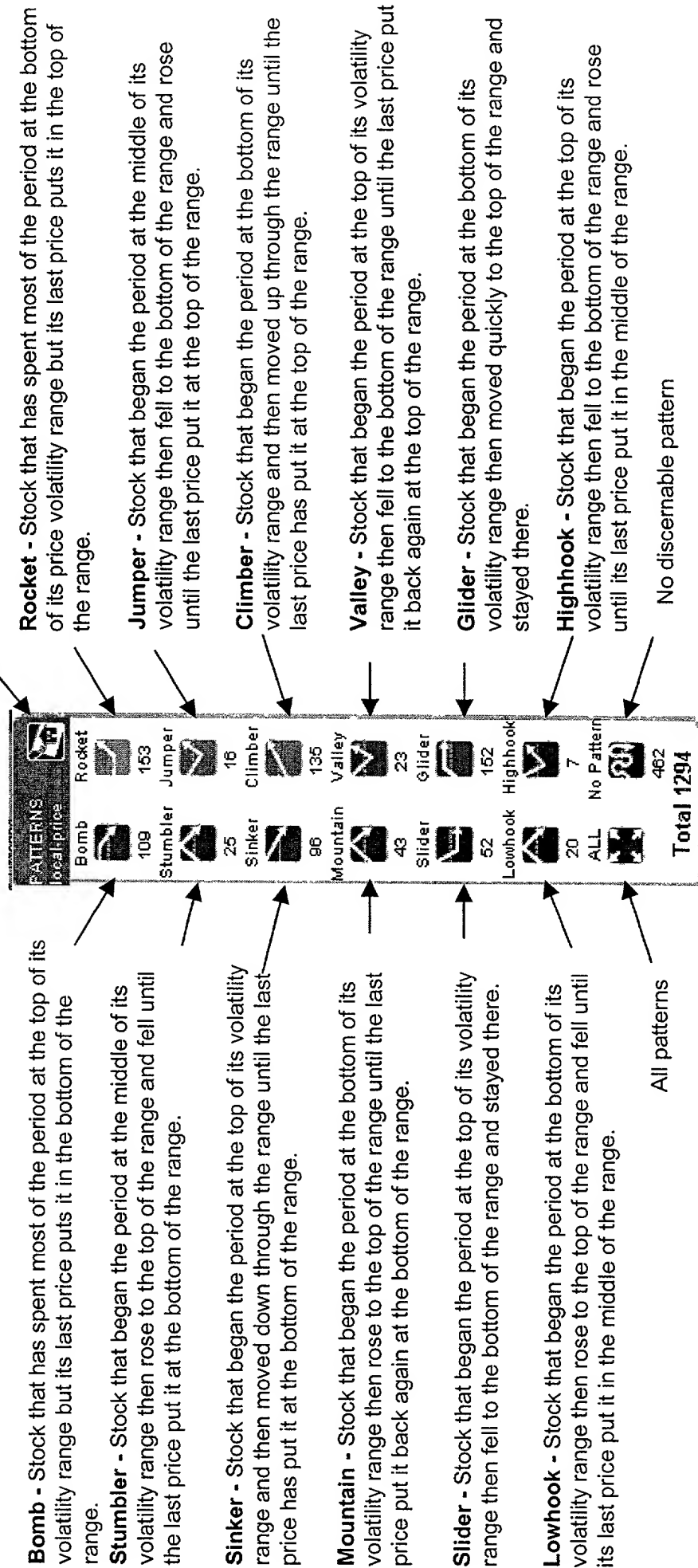


FIG. 17


Timescale Box

[v1.0 has a 15 minutes, 15 hour, 15 day, 15 week timescale.]


Displays the selected timescale the user has selected - whether 1 hour, 1 day, 1 month, or 1 quarter.


Also shows the date and time of the data on the screen. Hit SUBMIT button in the Navigation Bar to refresh data.


Timescale:
15 days



11:41
6/6/2001

1 hour

1 day

1 month


1 quarter

FIG. 18

Stock List

[v1.0 will only include Price Pattern strategy and will not include Stock List Ranking Buttons. Stock List Ticker search will also not yet be present.]

Displays list of stocks that correspond to users' chosen selection criteria.

Strategy Selected -

displays which strategy is selected and is generating stock scores

Strategy Selection Icons -

allows user to rank stocks based on either Price Pattern, Macroeconomic Variables, or Combined Ranking strategies

Scroll bar -

scrolls forwards and backwards among the stock list

Score -

displays ranking of stock on a scale from -6.0 to +6.0 based on a selected strategy

Descriptive Icons -

Sector, Country, Price Pattern

Ticker -

stock ticker

Stock Name -
name of stock

Stock List Ticker Search -

searches the Stock List by ticker and scrolls to show the stock if it is present. As a convenience, the user's most recent stock selection will automatically be shown here.

| Stock List (1-15 of 1276) | | |
|---------------------------|-----------|------------------|
| Score | Ticker | Stock Name |
| 6.0 | 0017.HK | NEW WORLD DEV |
| 6.0 | 2282.T | NIP MEAT PACKERS |
| 6.0 | 2897.T | NISSIN FOOD |
| 6.0 | 4022.T | KUREHA CHEM IND |
| 6.0 | LEI.AX | LEIGHTON HLDS |
| 6.0 | 0015.HK | ORIENTAL PRESS |
| 6.0 | 9354.T | KAMIGUMI |
| 6.0 | 0010.HK | HANG LUNG DEV |
| 6.0 | 8333.T | JOYO BANK |
| 6.0 | LING.DE | LINDE AG |
| 6.0 | SOL.MC | SOL MELIA |
| 6.0 | MED.NY | HE METSO |
| 6.0 | WBSV.VI | WIENERBERGER |
| 6.0 | DRON.D | DRAGAGE CONST |
| 6.0 | SIII.n.MI | SAIL RN |

Stock List Ranking Buttons:

In addition to ranking by strategy scores, the Stock List can be ranked according to the following criteria:

- Alphabetical by company name
- Percent change in local price over the selected timescale
- Percent change in dollar price over the selected timescale
- Capitalisation in billion \$
- Dividend yield in percent
- 12 months forward earnings growth in percent
- 12 months forward P/E

FIG. 19

Stock Detail Box

Displays detailed information on selected stock.

Time Stamp -

shows time of data available on screen. Hit SUBMIT button in Navigation Bar to refresh data.

Stock Name

Ticker

Sector

Industry

View in My Picks -

adds stock detailed to one of user's portfolios. See My Picks.

Trade -

allows user to place a trade on the stock detailed. See Trading Screen. In order to place a trade, you must first have a portfolio created. See My Trades.

Term definitions found in [Glossary](#)

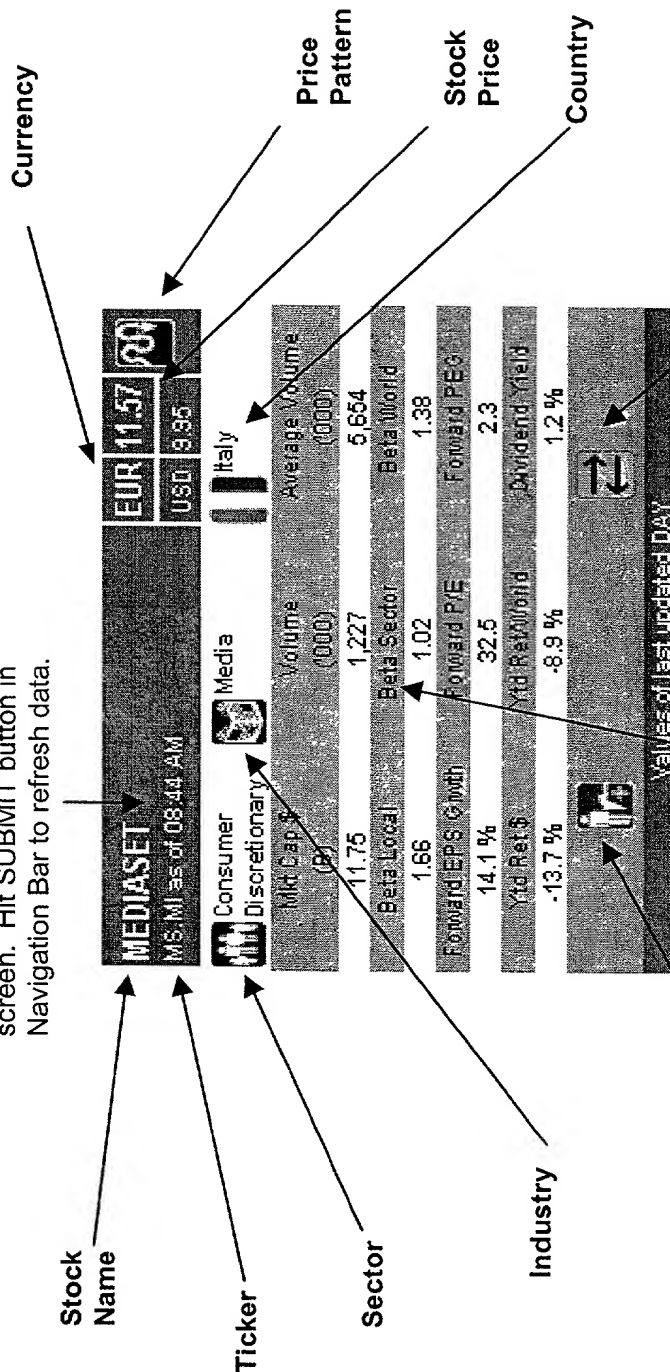
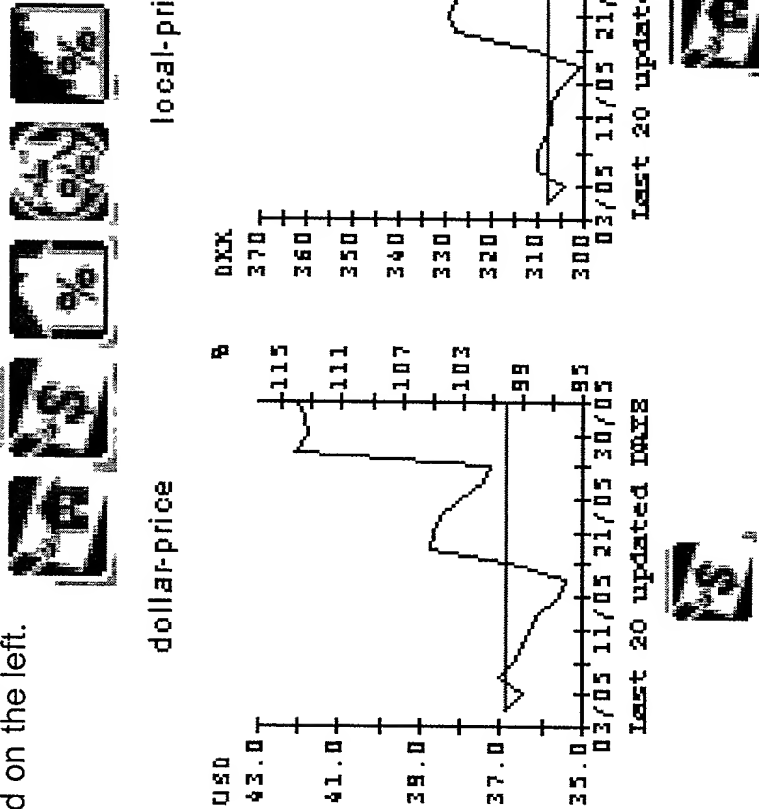


FIG. 20

Stock Detail Box

Dollar and Local Price Charts

A local-price graph is always displayed on the right. A graph of one of the 5 Pattern Types from the Navigation Bar will be displayed on the left.



Dollar Price graph (left):

- bottom scale: conforms to timescale set by user
- left scale: price in dollars
- right scale: percentage price set to 100 at beginning of period
- red line: price at beginning of period

Local Price graph (right):

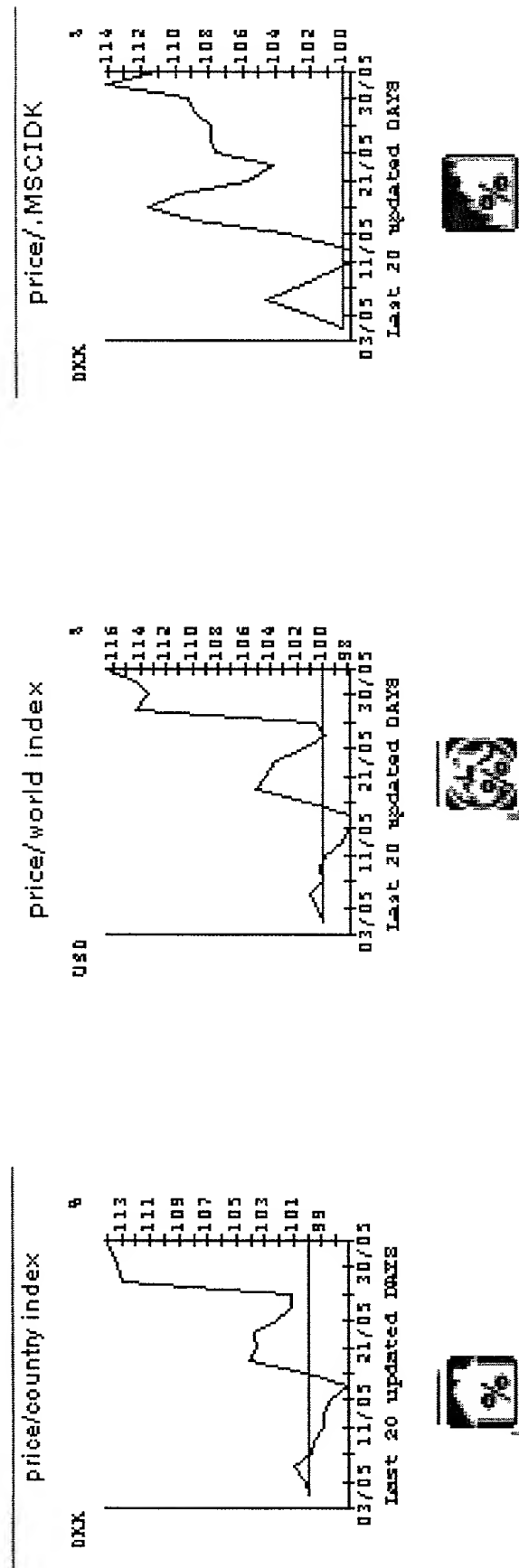
- bottom scale: conforms to timescale set by user
- left scale: price in local currency
- right scale: percentage price set to 100 at beginning of period
- red line: price at beginning of period

FIG. 21

Stock Detail Box

Relative Price Charts

The graphs below corresponding to the different Pattern Types would be displayed to the left of the local-price graph if the particular Pattern Type were selected from the Navigation Bar.



| | | | | | |
|--|-------------------------------------|-------------|----------------------|-----------------------------------|---------------------------------------|
| Price/Country graph (left): | bottom scale: conforms to timescale | set by user | price/country index | set to 100 at beginning of period | relative price at beginning of period |
| Price/World graph (centre): | bottom scale: conforms to timescale | set by user | price/world index | set to 100 at beginning of period | relative price at beginning of period |
| Price/Selected Index graph (right): | bottom scale: conforms to timescale | set by user | price/selected index | set to 100 at beginning of period | relative price at beginning of period |

Note: Selected index is the current index in use by Bullrun. An index is selected by 'Select Portfolio or Index' icon on the Navigation Bar. This display does not apply to personal or Bullrun portfolios.

FIG. 22

Screens Bar



1. **Big Picture** (default screen) - shows how any index or portfolio is evolving over a given timeframe.
2. **Best and Worst** - shows which stocks are performing extremely well or poorly in an index or portfolio.
3. **Fan Out** - displays a basket of similar stocks for a selected equity.
4. **Differences** - compares performance across different indices or portfolios.
5. **My Picks** - displays buy and sell recommendations to stocks in a user's portfolios, based on a given investment strategy.
6. **Bullrun Picks** - displays the system's recommended stocks for a given strategy.
7. **My Trades** - keeps a record of buy and sell orders passed through the programme.
8. **Registration Information** - allows the user to modify registration information.

FIG. 23

[illegible][illegible]

Best and Worst

Best and Worst shows the highest and lowest scores for any category of stocks. For example, in the Stoxx Euro 100, which are the best buys and worst sells across the whole index over the past 1 hour? Which are the best and worst performing banks? In **Best and Worst**, the user is guided directly to centre of current market action.

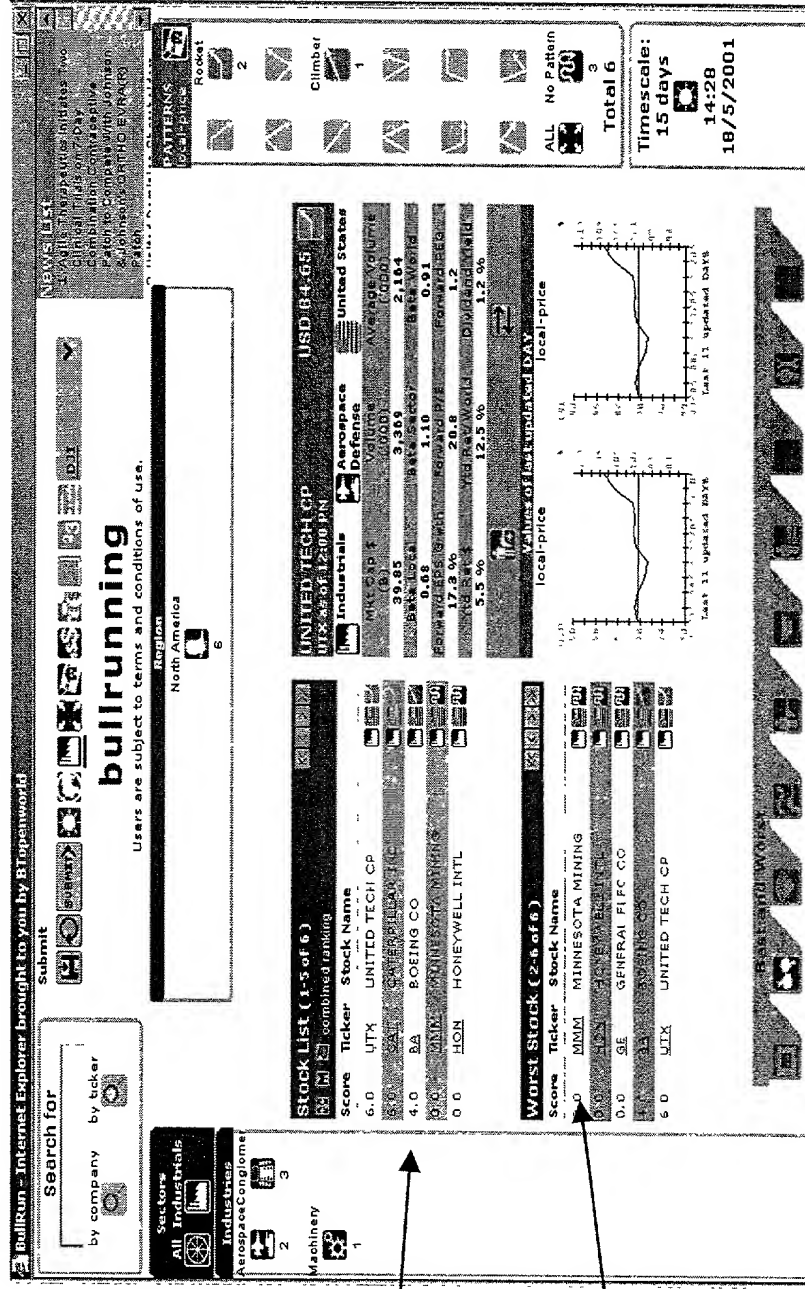
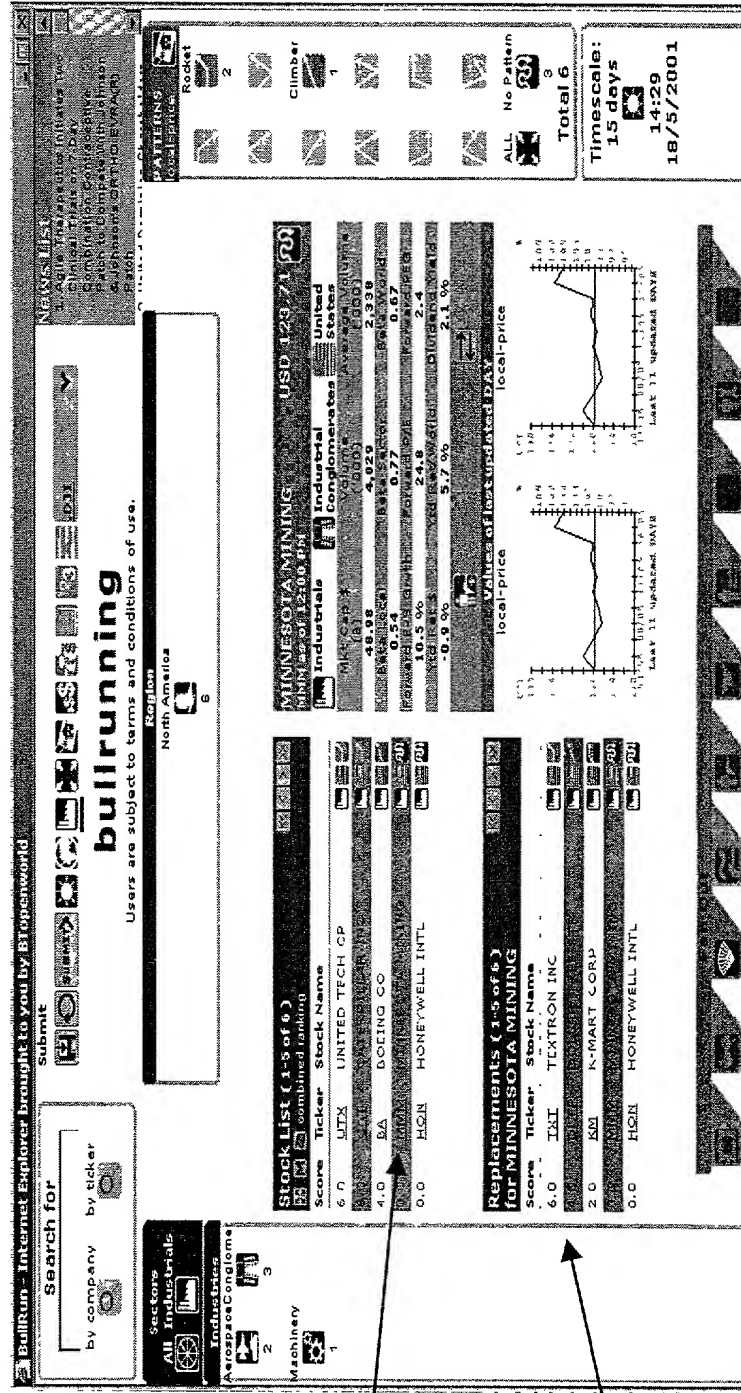


FIG. 25

Fan Out

Fan Out lists the stocks in an index or portfolio so that when a stock is picked, a basket of related choices is shown for that stock. The emphasis is on 'which others can I choose?' For example, in the Dow Index, if International Paper is picked, a basket appears showing US paper companies ranked best to worst. International Paper's position is shown within the basket. The user has an instant display of alternatives to any stock and the current ranking of that stock in the comparative baskets.



Selected Stock

Alternatives

FIG. 26

Differences

Differences allows you to compare the stocks in one portfolio or index with those of another. For example, how are stocks in the FTSE 100 performing compared to the DAX 200? What are the best performing stocks in my portfolio compared to the MSCI World Index?

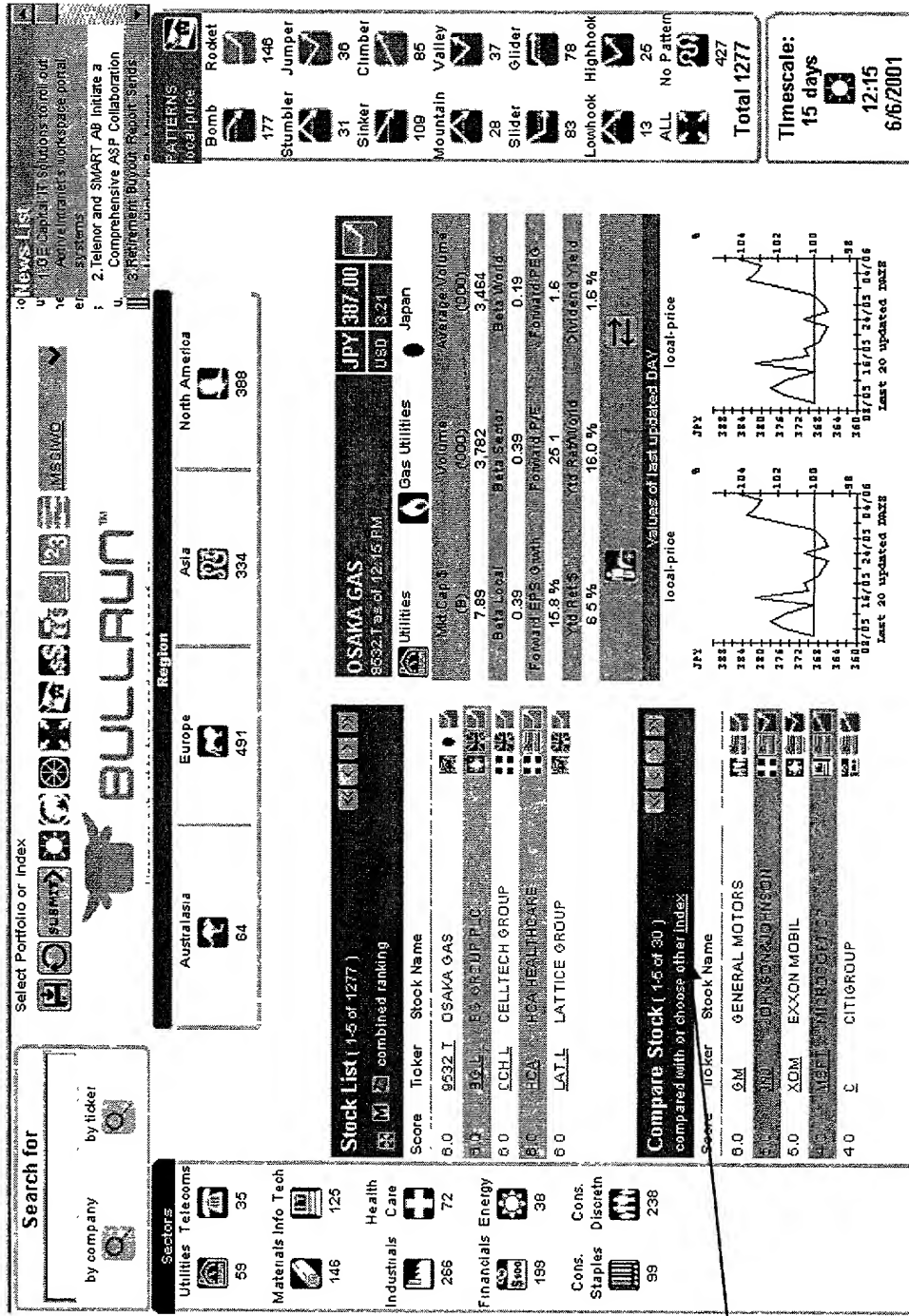


FIG. 27

[v1.0 only includes the price pattern strategy. E-mail notification is not yet implemented.]

My Picks allows the user to choose to receive e-mail notifications of buy/sell signals from the different strategies (Price Pattern, Macroeconomic Variables, or Combined) for all of the stocks currently in the system. It also allows the user to track the performance of buy and sell signals for a stock based on a particular investment strategy. For example, for a user following a price pattern strategy, which financial services stock had the best performance over the past 6 months?

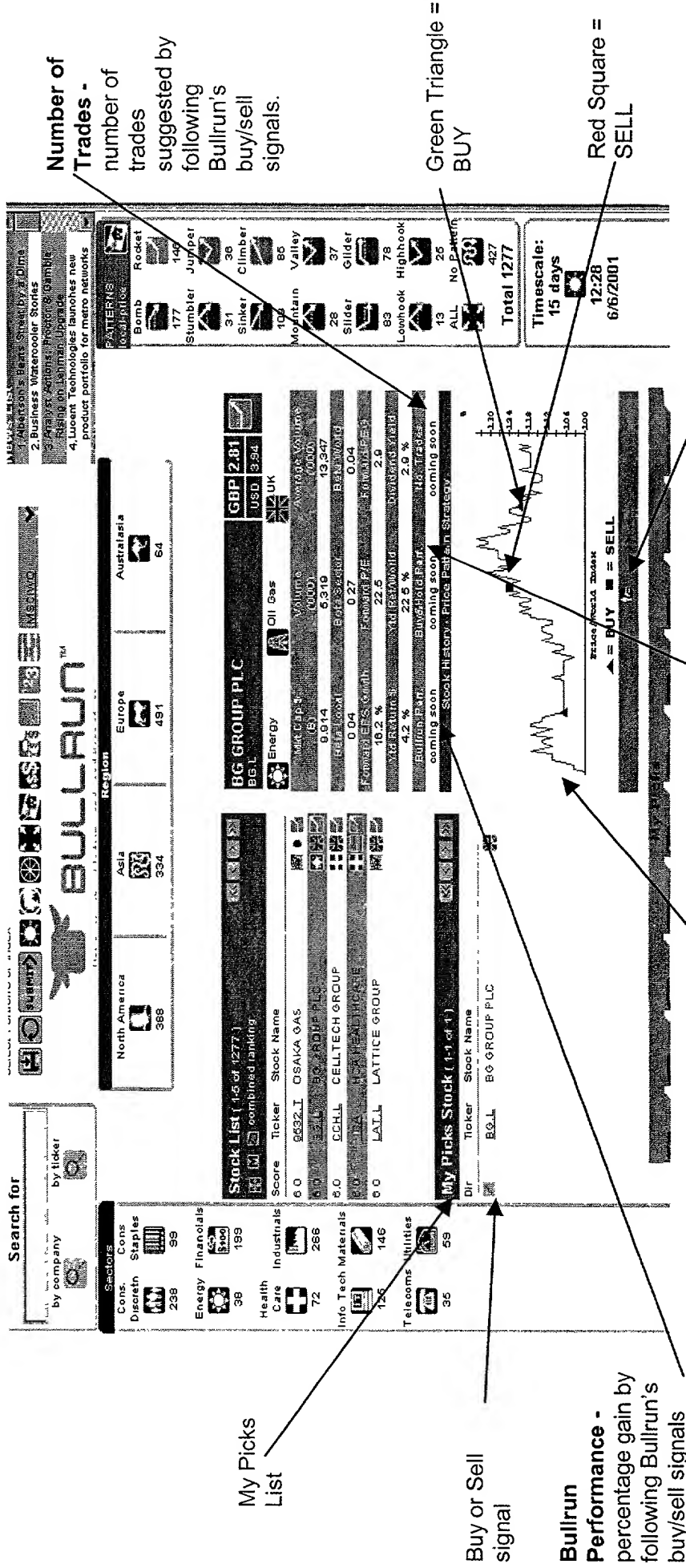


FIG. 28

Bullrun Picks

[v1.0 Bullrun Picks applies only a Price Pattern Strategy to the MSCI World Index.]

Bullrun Picks will show recommended portfolios that reflect each of the three strategies (Price Pattern, Macroeconomic Variable, Combined) applied to the MSCI World Index, the 10 MSCI Global Sectors, the S&P 500, NASDAQ, Europe Stoxx and Topix. For example, which MSCI World Info. Tech stocks should I be long or short?

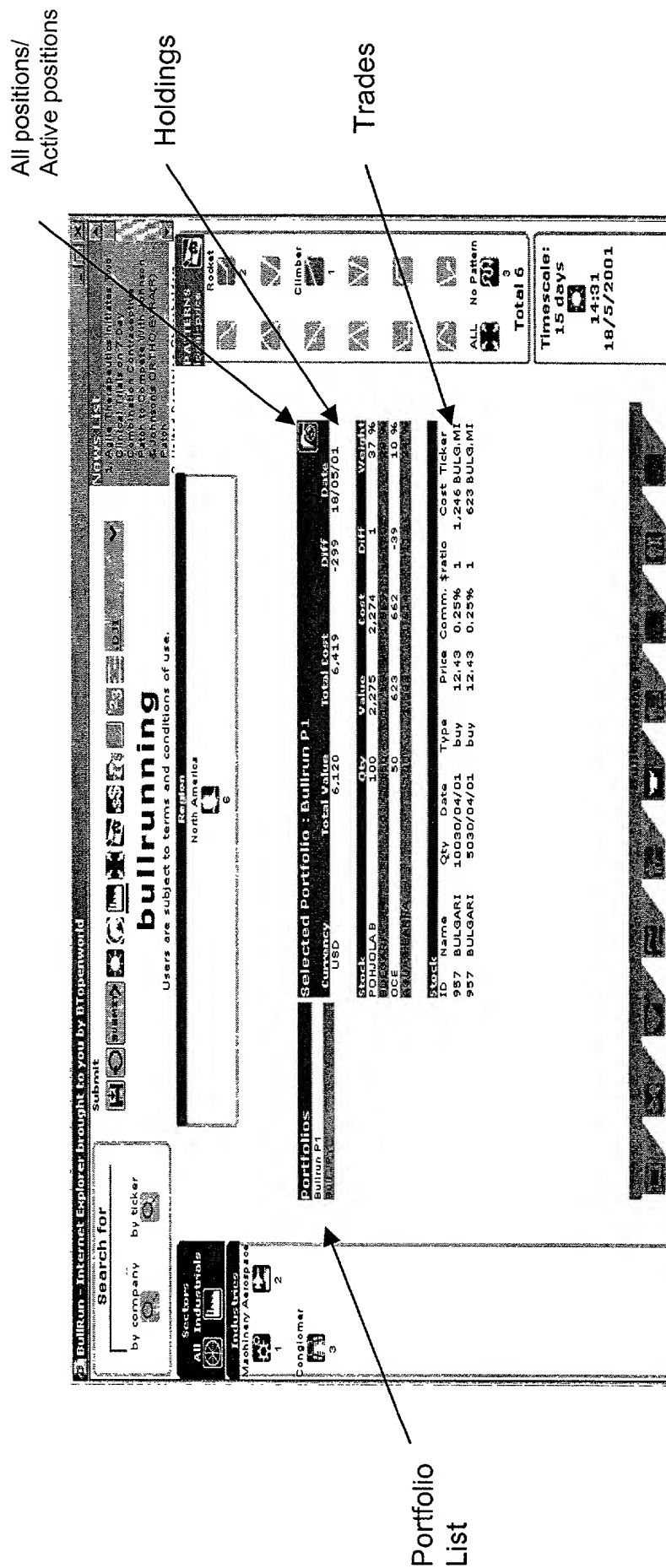


FIG. 29

My Trades

[v1.0 Portfolio uploads from Excel are not yet available.]

My Trades keeps a record of buy and sell orders passed through the programme. Performance of the client's portfolios can be calculated and displayed. A user creates and manages portfolios here and will be able to upload his own portfolios directly into the system from an Excel spreadsheet.

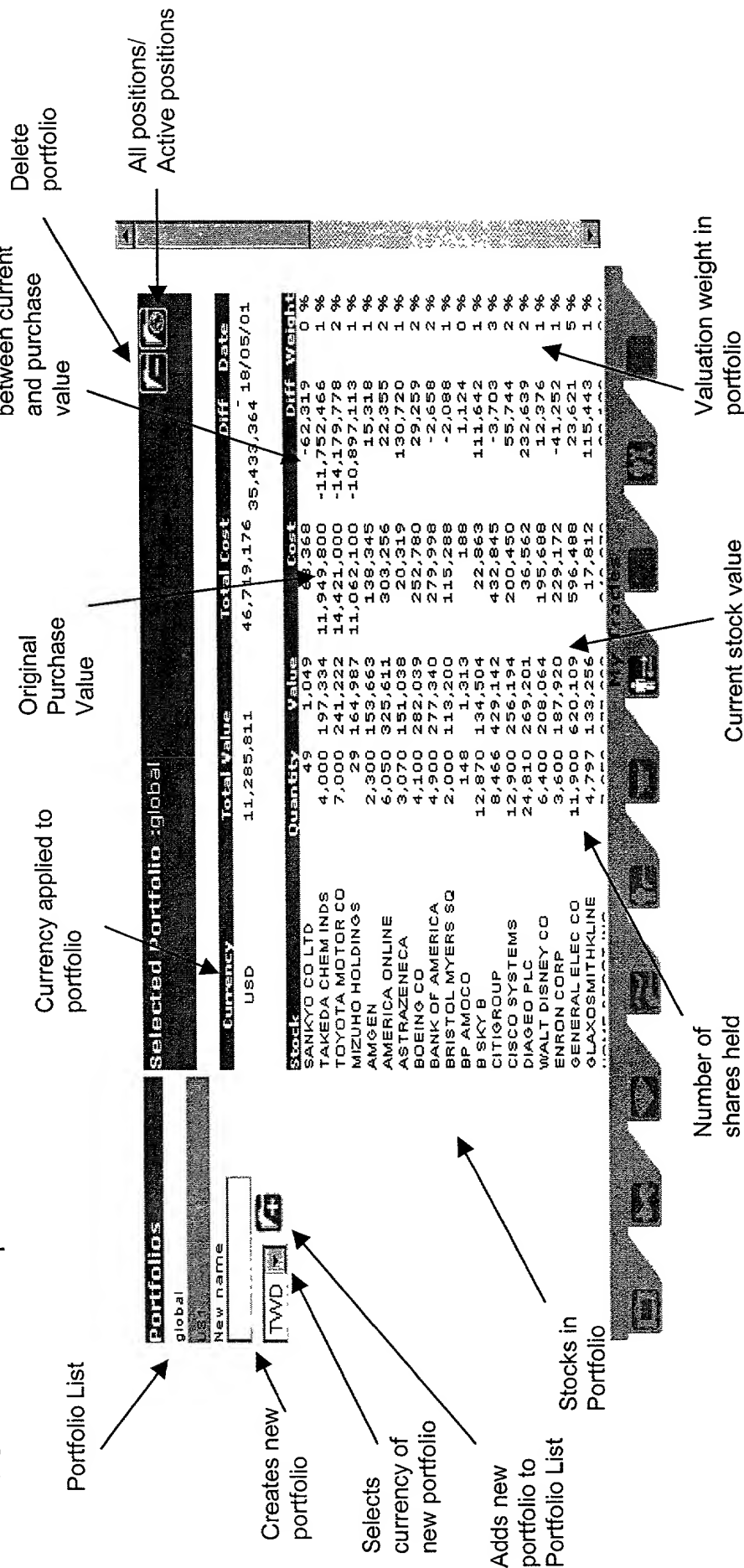
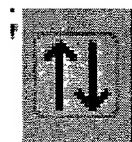


FIG. 30

Trading Screen



This screen is accessed by clicking on the Trade button in the Stock Detail Box.

Select Portfolio

Trade information

| | | | | | |
|-----------|--------|----------|---------------------------------|-------------------|-----------------------|
| global | BUY | Quantity | Current price in local currency | Broker commission | Current date |
| portfolio | action | quantity | price | commission | Date |
| | | 0 | 66.81 | 0.25 % | 2001-05-18 14:37:47.0 |

Execute trade

FIG. 31

Registration information allows you to update details from the Registration process.



FIG. 32